CLAIMS:

1. A circuit to determine a velocity of a coil to which a driving current is applied in a magnetic field, comprising:

a circuit to terminate the driving current in said coil;

a circuit to apply a current to said coil to create a magnetic field to oppose eddy currents established in structures adjacent said coil by said driving current; and

a circuit for measuring a BEMF in said coil after said current has been applied to oppose said eddy currents.

2. The circuit of claim 1 wherein said driving current is in a first direction in said coil, and wherein said circuit to apply a current to said coil applies a current in a direction opposite said first direction.

3. The circuit of claim 1 wherein said circuit to apply a current to said coil applies a current for a time directly related to a time that a flyback current appears in said coil above a predetermined magnitude after said driving current has been terminated.

4. The circuit of claim 1 wherein said circuit to apply a current to said coil applies a current for a time directly related to a magnitude of the original current command after said driving current has been terminated.

5. The circuit of claim 1 wherein said circuit to apply a current to said coil applies a current for a time directly related to a magnitude of said driving current prior to when said driving current has been terminated.

6. The circuit of claim 1 further comprising a delay element to delay the termination of the eddy current opposing current for a predetermined time.

7. A circuit to determine a BEMF voltage of a VCM coil after termination of a driving current in a first current direction in said coil, comprising:

a circuit for activating selected VCM coil driver transistors to apply a current to said coil in a direction opposite said first current direction to generate a magnetic field to oppose eddy currents established in structures adjacent said coil by said driving current.

8. The circuit of claim 7 wherein said circuit for activating selected VCM coil driver transistors applies said current to said coil for a time directly related to a time that a flyback current appears in said coil above a predetermined magnitude after said driving current in said first direction has been terminated.

9. The circuit of claim 7 wherein said circuit for activating selected VCM coil driver transistors applies said current to said coil for a time directly related to a magnitude of the original current command after said driving current in said first direction has been terminated.

10. The circuit of claim 7 wherein said circuit for activating selected VCM coil driver transistors applies said current to said coil for a time directly related to a

magnitude of said driving current prior to when said driving current has been terminated.

11. The circuit of claim 7 further comprising a delay element to delay the termination of the eddy current opposing current for a predetermined time.

12. A circuit for use in determining a velocity of a head assembly of a VCM after termination of a driving current in a coil of said VCM, comprising:

a circuit for activating selected VCM coil driver transistors to apply a current to said coil of said VCM to create a magnetic field that opposes eddy currents established in structures adjacent said coil by said driving current.

13. The circuit of claim 12 wherein said driving current is in a first current direction and wherein said circuit for activating selected VCM coil driver transistors applies a current to said coil in a direction opposite said first current direction.

14. The circuit of claim 12 wherein said circuit for activating selected VCM coil driver transistors applies a current to said coil for a time directly related to a time that a flyback current appears in said coil above a predetermined magnitude after said driving current has been terminated.

15. The circuit of claim 12 wherein said circuit for activating selected VCM coil driver transistors applies a current to said coil for a time directly related to a

magnitude of the original current command after said driving current has been terminated.

16. The circuit of claim 12 wherein said circuit for activating selected VCM coil driver transistors applies a current to said coil for a time directly related to a magnitude of said driving current prior to when said driving current has been terminated.

17. The circuit of claim 12 further comprising a delay element to delay the termination of the eddy current opposing current for a predetermined time.

18. A method for determining a velocity of a coil to which a driving current is applied in a magnetic field, comprising:

terminating said driving current;

allowing a flyback current in said coil to reduce to below a predetermined magnitude;

applying a current to said coil of magnitude and direction to cancel eddy currents in structures adjacent said coil; and

measuring a BEMF in said coil, wherein a magnitude of said BEMF is directly related to the velocity of said coil.

19. The method of claim 18 wherein said applying a current to said coil comprises applying a current to said coil a time directly related to a magnitude of the original current command.

20. The method of claim 18 wherein said applying a current to said coil comprises applying a current to said coil in a direction opposite said driving current.

21. The method of claim 18 wherein said applying a current to said coil comprises applying a current to said coil for a time directly related to a time for said flyback current to reduce to below a predetermined magnitude.

22. The method of claim 18 wherein said applying a current to said coil comprises applying a current to said coil a time directly related to a magnitude of said driving current.

23. A method for determining a BEMF voltage of a coil of a VCM after termination of a driving current in said coil, comprising:

determining when said driving current has been terminated; and

activating selected VCM coil driver transistors to apply a current to said coil to create a magnetic field to oppose eddy currents established in structures adjacent said coil by said driving current.

24. The method of claim 23 wherein said driving current is in a first current direction, and wherein said activating selected VCM coil driver transistors comprises activating selected VCM coil driver transistors to create a current in said coil in a direction opposite to said first current direction.

25. The method of claim 23 wherein said activating selected VCM coil driver transistors comprises activating selected VCM coil driver transistors for a time directly related to a magnitude of the original current command voltage when said driving current is terminated.

26. The method of claim 23 wherein said activating selected VCM coil driver transistors comprises activating selected VCM coil driver transistors for a time directly related to a time that said flyback current is above a predetermined magnitude after said driving current has been terminated.

27. The method of claim 23 wherein said activating selected VCM coil driver transistors comprises activating selected VCM coil driver transistors for a time directly related to a magnitude of said driving current prior to when said driving current has been terminated.